

**PROPOSED AMENDMENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: JESSUP et al.

Confirmation No.: 7836

Serial No.: 10/799,542

Group Art Unit: 3623

Filed: March 11, 2004

Examiner: Justin Pats

Title: METHOD, SYSTEM AND PROGRAM PRODUCT FOR  
ASSESSING A PRODUCT DEVELOPMENT PROJECT  
EMPLOYING A COMPUTER-IMPLEMENTED EVALUATION  
TOOL

To: Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Response to Office Action**

Dear Sir:

This paper is filed responsive to the Office Action mailed June 12, 2009, in connection with the above-designated U.S. patent application. *To facilitate the prosecution of the subject application, Applicants' undersigned representative invites the Examiner to contact him at the time that the Examiner is considering this Response.* Allowance of all claims is respectfully requested in view of the Amendments and Remarks below.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks** begin on page 9 of this paper.

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### Amendments to the Claims

Kindly amend claims 1-3, 6, 8-10, 13, 15-17 & 20, as set forth below. All pending claims are reproduced below, with changes in the amended claims shown by underlining (for added matter) and double brackets (for deleted matter).

1. (Currently Amended) A method of assessing a product development management effort comprising:

identifying multiple possible root causes of trouble for a product development management effort, the product development management effort being undertaken to produce a tangible product;

identifying multiple questions sets for diagnosing the multiple possible root causes of trouble, each question set being a comprehensive set of questions directed to diagnosing a respective root cause of trouble of the multiple possible root causes of trouble and identifying specific project role(s) to provide responses to questions of the question set, the responses from the specific project role(s) facilitating diagnosing the respective root cause of trouble and thus assessing the product development management effort to produce the tangible product, wherein different specific project roles are identified to provide responses to questions of different questions sets of the multiple question sets;

providing a computer-implemented tool to evaluate answers to the question sets and provide guidance based on scored questions regarding existence of one or more root causes of trouble for the product development effort from the identified multiple possible root causes of trouble, the scored questions being produced by an automated scoring mechanism, the automated scoring mechanism automatically counting the number of responses in required fields of a question set of the multiple question sets and scoring the question set against a total number of required fields in the question set to produce a numeric value which is an [[automatic]] indication of the strength of responses for the question set, the

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strength of responses indication being an automatic indication of the strength of analysis evidence of the respective root cause of trouble and representing the impact of the respective root cause of trouble~~[[,]]~~;

wherein the computer-implemented tool further produces a numeric value ~~[[and]]~~ representing the impact of the respective root cause of trouble on the project development management effort; and

wherein the computer-implemented tool plots each root cause of trouble of the multiple possible root causes of trouble using the produced numeric values in a graph with a first axis representing strength of responses evidence for the respective root causes of trouble and a second axis representing impact of the respective root causes on the product development management effort, the graph facilitating assessing the product development management effort by facilitating identifying a possible root cause of trouble of the multiple possible root causes of trouble with a high impact on the product development management effort and strong responses evidence in support of the presence of the root cause of trouble.

2. (Currently Amended) The method of claim 1, further comprising evaluating project management processes employed for the product development management effort by comparison thereof to identified, standard project management processes, and wherein the computer-implemented tool provides guidance regarding effectiveness of implementation of the project management processes employed for the product development management effort.

3. (Currently Amended) The method of claim 2, further comprising evaluating project management work product of the product development management effort and inputting work product assessment to the computer-implemented tool as further evidence of the existence of the one or more root causes of trouble for the product development management effort or the effectiveness of implementation of the project management processes employed for the product development project.

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4. (Previously Canceled).

5. (Previously Presented) The method of claim 1, further comprising identifying in the computer-implemented tool the specific project personnel roles to answer questions of the multiple question sets, wherein the multiple question sets also reside in the computer-implemented tool.

6. (Currently Amended) The method of claim 1, wherein the product development management effort comprises one of a management effort for a software development project or a management effort for a hardware development project.

7. (Previously Canceled).

8. (Currently Amended) A system for assessing management of a product development project comprising:

a processor comprising a computer-implemented tool identifying multiple common root causes of trouble for a product development management effort undertaken to produce a tangible product and multiple question sets for diagnosing the multiple common root causes of trouble, each question set being a comprehensive set of questions directed to diagnosing a respective root cause of trouble of the multiple possible root causes of trouble and identifying specific project role(s) to provide responses to questions of the question set, the responses from the specific product role(s) facilitating diagnosing the respective root cause of trouble and thus assessing the product development management effort to produce the tangible product, wherein different specific project roles are identified to provide responses to questions of different questions sets of the multiple question sets, and wherein the computer-implemented tool evaluates answers to the question sets and provides guidance based on scored questions regarding existence of one or more root causes of trouble for the product development management effort from the identified multiple common root causes of trouble, the scored questions being produced by an automated scoring

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mechanism, the automated scoring mechanism automatically counting the number of responses in required fields of a question set of the multiple question sets and scoring the question set against a total number of required fields in the question set to produce a numeric value which is an automatic indication of the strength of responses for the question set, the strength of responses indication being an automatic indication of the strength of analysis evidence of the respective root cause of trouble<sub>[[,]]</sub>;

wherein the computer-implemented tool further produces a numeric value [[and]] representing the impact of the respective root cause of trouble on the project development management effort; and

wherein the computer-implemented tool plots each root cause of trouble of the multiple possible root causes of trouble using the produced numeric values in a graph with a first axis representing strength of responses evidence for the respective root causes of trouble and a second axis representing impact of the respective root causes on the product development management effort, the graph facilitating assessing the product development management effort by facilitating identifying a possible root cause of trouble of the multiple possible root causes of trouble with a high impact on the product development management effort and strong responses evidence in support of the presence of the root cause of trouble.

9. (Currently Amended) The system of claim 8, wherein the computer-implemented tool further comprises means for evaluating project management processes employed for the product development management effort by comparison thereof to identified, standard project management processes, and wherein the computer-implemented tool provides guidance regarding effectiveness of implementation of the project management processes employed for the product development management effort.

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10. (Currently Amended) The system of claim 9, wherein the computer-implemented tool further comprises means for evaluating project management work product of the product development management effort as further evidence of the existence of one or more root causes of trouble for the product development management effort or the effectiveness of implementation of the project management processes employed for the product development management effort.

11. (Previously Canceled).

12. (Previously Presented) The system of claim 8, wherein the computer-implemented tool further comprises means for identifying the specific project personnel roles to answer questions of the multiple question sets, wherein the multiple question sets also reside within the computer-implemented tool.

13. (Currently Amended) The system of claim 8, wherein the product development management effort comprises one of a management effort for a software development project or a management effort for a hardware development project.

14. (Previously Canceled).

15. (Currently Amended) At least one program storage device readable by a computer embodying at least one program of instructions executable by the computer to perform, when executing on the computer, a method of assessing a product development management effort, the method comprising:

identifying multiple possible root causes of trouble for a product development management effort, the product development management effort being undertaken to product a tangible product;

identifying multiple question sets for diagnosing the multiple possible root causes of trouble, each question set being a set of comprehensive questions directed to diagnosing a respective root cause of trouble of the multiple possible root causes of trouble and identifying specific project role(s) to provide responses to questions of the question set, the responses from the specific project role(s)

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facilitating diagnosing the respective root cause of trouble and thus assessing the product development management effort to produce the tangible product, wherein different specific project roles are identified to provide responses to questions of different questions sets of the multiple question sets;

evaluating answers to the question sets and providing guidance based on scored questions regarding existence of one or more root causes of trouble for the product development effort from the identified multiple possible root causes of trouble, the scored questions being produced by an automated scoring mechanism, the automated scoring mechanism automatically counting the number of responses in required fields of a question set of the multiple question sets and scoring the question set against a total number of required fields in the question set to produce a numeric value which is an [[automatic]] indication of the strength of responses for the question set, the strength of responses indication being an [[automatic]] indication of the strength of [[analysis]] evidence of the respective root cause of trouble;

wherein the computer-implemented tool further produces a numeric value [[and]] representing the impact of the respective root cause of trouble on the project development management effort; and

wherein the computer-implemented tool plots each root cause of trouble of the multiple possible root causes of trouble using the produced numeric values in a graph with a first axis representing strength of [[responses]] evidence for the respective root causes of trouble and a second axis representing impact of the respective root causes on the product development management effort, the graph facilitating accessing the product development management effort by facilitating identifying a possible root cause of trouble of the multiple possible root causes of trouble with a high impact on the product development management effort and strong [[responses]] evidence in support of the presence of the root cause of trouble.

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16. (Currently Amended) The at least one program storage device of claim 15, wherein the method further comprises evaluating project management processes employed for the product development management effort by comparison thereof to identified, standard project management processes, and providing guidance regarding effectiveness of implementation of the project management processes employed for the product development management effort.

17. (Currently Amended) The at least one program storage device of claim 16, wherein the method further comprises evaluating project management work product of the product development management effort and providing work product assessment as further evidence of the existence one or more root causes of trouble for the product development management effort or the effectiveness of implementation of the project management processes employed for the product development management effort.

18. (Previously Canceled).

19. (Previously Canceled).

20. (Currently Amended) The at least one program storage device of claim 15, wherein the product development management effort comprises one of a management effort for a software development project or a management effort for a hardware development project.

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### Remarks

Allowance of the claims presented herewith is respectfully requested. Claims 1-3, 5, 6, 8-10, 12, 13, 15-17 & 20 remain pending.

By this paper, independent claims 1, 8 & 15 are amended to more clearly point out and distinctly claim certain aspects of the present invention. In particular, these claims are amended to specify that the computer-implemented tool produces a numeric value which is an indication of the strength of evidence of the respective root cause of trouble, and additionally produces a separate numeric value which is representative of the impact of the respective root cause of trouble on the product development effort. Additionally, Applicants' independent claims are amended to specify that the recited protocol is for evaluating a product development *management* effort. Support for the amended claim language can be found throughout the application as filed. For example, reference specification paragraphs [0052] – [0070], as well as FIG. 4A of the application. No new matter is added to the application by any amendment presented.

Initially, claims 1-3, 5, 6, 8-10, 12, 13, 15-17 & 20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failure to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Responsive to this rejection, Applicants have herein amended independent claims 1, 8 & 15 to separately call out the strength of evidence numeric value and the impact numeric value ascertained by the tool for the respective root causes of trouble. These two variables are then employed in a graphical plot as recited in the independent claims. In view of these amendments, reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph, rejection is respectfully requested.

In the Office Action, claims 1-3, 5, 6, 8-10, 12, 13, 15-17 & 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Whitacre et al. (U.S. Patent Publication No. 2004/0138944; hereinafter Whitacre), also evidenced by Whitacre et al., Provisional Application filed July 22, 2002, pages 1-76 (hereinafter Provisional), in view of Miller (U.S. Patent Publication No. 2002/0165752; hereinafter Miller), further in view of Applicants' Admitted Prior Art (hereinafter AAPA), further in view of Nelson (U.S. Patent No. 7,451,063; hereinafter

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Nelson). This rejection is respectfully traversed to any extent deemed applicable to the claims presented herewith, and reconsideration thereof is requested.

Independent claims 1, 8 & 15 are amended, in part, to emphasize that Applicants' protocol is for assessing a product development *management effort* undertaken to produce a tangible product. The Office Action recognizes at page 8, paragraph 2 that Whitacre in view of Miller in view of AAPA does not explicitly teach that the project or management effort is undertaken to produce a tangible product. Applicants agree. However, the Office Action concludes that this aspect of Applicants' invention is taught by Nelson. This conclusion is respectfully traversed.

As recited in the claims presented herewith, Applicants claim a protocol for assessing a *product development management effort*. In accordance with Applicants' invention, root causes of trouble are identified that hinder or may hinder the product development management effort. In contrast, Nelson deals entirely with Failure Mode Detection Analysis, which is a quality control procedure used in Operations Management. FDMA and FMEA (Failure Mode and Effects Analysis) analyze product failure modes (or failure modes in the processes that create the products) in order to prioritize where to focus improvement efforts (see, for example, Nelson column 1, lines 40-48). Thus, Nelson is directed to improving product quality. While Nelson's FDMA approach might be employed in a product development effort to ensure that *the product* is being produced with minimal critical failure modes, Applicants' claimed invention is used to identify root cause of trouble in the *project management of that effort*. Thus, Applicants' invention aims to correct the root cause of trouble of the product development management effort, meaning correct any failed management of the project, but does not relate to correcting failure modes in the product design or manufacturing process itself. The most smoothly managed project might produce a product with several critical failure modes, and thus the need for Nelson. Applicants' invention, on the other hand, operates at a higher (i.e., managerial) level in the product development effort. Most significantly, Applicants respectfully submit that there is no motivation to modify the product quality control technique of Nelson when attempting to identify and correct root cause of trouble in the management of a product development effort.

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For at least this reason, the claims presented are believed to patentably distinguish over the applied and known art.

In Applicants' invention, a protocol is recited for identifying multiple possible root causes of trouble for the product development *management effort*. Specifically, Applicants specify in their independent claims *identifying specific project role(s)* to provide responses to questions of the question set. Since Applicants are troubleshooting *a product development management effort*, it is necessary to identify the specific project roles for providing the best responses to questions of the question set. Thus, the protocol recited explicitly sets forth processing directed to Applicants' assessment of the product development management effort, in order to identify root causes of trouble within such a management effort.

Additionally, Applicants specify that the responses from the specific project role(s) facilitate diagnosing the respective root cause of trouble, and thus assessing of the project development management effort to produce the tangible product, and further that *different specific project roles are identified to provide responses to questions of different question sets of the multiple question sets*. In accordance with Applicants' recited protocol, multiple specific project roles are identified for providing responses to different questions of different question sets of the multiple question sets identified for diagnosing the multiple possible root causes of trouble of the product development management effort. These characterizations are believed to patentably distinguish Applicants' protocol over the applied and known teachings.

Again, Applicants' independent claims recite *identifying specific project role(s) to provide responses to questions of the question set*. This identifying is performed for each question set of the multiple question sets identified for diagnosing the multiple possible root cause of trouble. Cited against this aspect of Applicants' invention are the teachings of Nelson, and in particular, the recognition that both design and process FMDAs can be conducted using design engineers and process engineers. In particular, the risk factor number is asked for and responded to by the team of engineers specific to the process or product design. The applicability of this teaching to Applicants' recited invention is respectfully traversed.

Before discussing Nelson, however, Whitacre is briefly addressed. As previously noted, Whitacre does not identify project roles or key personnel as defined in Applicants' invention to

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whom questions should be asked. A careful reading of Whitacre fails to uncover any teaching or suggestion of tailoring an individual's questions based on their role as related to each possible root cause of trouble, let alone specifically identifying those roles based on the particular question set at issue. This aspect of Applicants' invention is significant from a resource expenditure standpoint, and ensures that the best information is received from the most reliable sources. Moreover, the proper roles to be included in the assessment may well encompass roles that are not directly affected by the outcome of the actions to be taken, contrary to the suggestions of Whitacre.

Nelson is equally unspecific when applied against this aspect of Applicants' invention. Nelson teaches involving design engineers or process engineers depending upon whether a design FDMA or process FDMA is being conducted, *again, on the product, as opposed to the management process to which the present invention is directed*. Further, Nelson is limiting in that it involves only design engineers, as opposed, for example to managers, manufacturers, customers, etc., all of whom may be involved in the product development. For example, engineers, while possessing technical knowledge, may be ill-suited to fully assess potential breakdowns in a design or process management effort. Nelson's teaching of using only "an engineer working with the process" (see column 18, lines 15-16) to conduct an FDMA review teaches away from Applicants' invention in that it does not contemplate an intelligent decision identifying specific project roles to provide responses to questions of specific question sets created to diagnose respective root causes of trouble, as recited by Applicants. Further, Applicants' independent claims recite that different specific project roles are identified to provide responses to questions of different question sets of the multiple question sets. No such teaching is provided by Nelson, or the other art of record. Again, Nelson teaches that the engineer working on the process is to answer the questions. This makes sense when trouble shooting a product using FDMA (to which Nelson is directed), but is not practical when evaluating the product development management effort (as claimed by Applicants). For these additional reasons, Applicants respectfully submit that the independent claims presented patentably distinguish over the teaching of the applied and known art.

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In addition, as amended Applicants' independent claims recite that the computer-implemented tool produces a numeric value which is an indication of the strength of responses for the question set, and represents the strength of evidence of the responses. Applicants' strength of evidence numeric value can be thought of as a validation or negation of responses to the questions asked. This recited process compares the number of required fields answered in the affirmative to the total number of required fields, and uses this in an algorithm that ultimately produces an indication about whether the document contains data that supports or negates the possibility of a root cause of trouble. Cited against this aspect of Applicants' invention is Miller. Miller addresses administering tests to job applicants and teaches, in paragraph [0247] identifying a percentage of acquired questions answered correctly (see also paragraph [0074] of Miller). Applicants respectfully submit that this teaching has nothing to do with their recited invention. Miller discusses ordinary scoring of a test. In contrast, Applicants recite determining a numeric value which is *representative of strength of evidence*, which either supports or rejects, e.g., via examination of work product of a project, the presence of a potential management problem in the project's development. See in this regard FIG. 3C of Applicants' application which provides some areas of potential problem and numeric values indicating an assessment of whether the work product supports or negates an assessment of a problem with those areas.

Analogizing the teachings of Miller to Applicants' recited invention is also believed improper since Miller focuses on identifying whether candidates answers questions (mandatory or not) correctly or incorrectly. Miller's required questions are ones that all applicants should answer so as to objectively rank the applicants according to how correctly they answer those mandatory questions. In contrast, Applicants' recited required fields, support or negate an *answer* to a question of the selected question set. In other words, the required fields in Applicants' invention are points of validation of an answer to a question, to verify that there is strength of evidence in the answer given. In contrast, Miller does not require validation of applicant answers, per se. They are either correctly answered or incorrectly answered. In Miller, an applicant could answer questions about his character, and we might make a conclusion based on those answers. However, there is no validation of strength or accuracy of the answer. This is contrasted with Applicants' recited invention. By way of example, in Applicants' invention there might be an inquiry as to whether deliverables for a project are well defined (see FIG. 3C

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“deliverable definition”). The project manager might first ask questions to employees to illicit from them whether they believe deliverables have been well defined. Employees might assert that deliverables have been defined well, and then the project reviewer examines, for instance, documents distributed to employees that purport to define the deliverables. In accordance with Applicants’ invention, certain “required fields” might be expected to appear in those documents given to the employees, in the sense that if these fields are present or not present in the documents, indicates that deliverables have or have not been well defined to the employees. Examples of a required field may include (i) to whom the deliverable should be submitted, and (ii) the required timeframe for submission. Assuming that employees receive documentation with 90% of the required fields, it indicates strongly that their responses can be held valid, and that deliverables have in fact been well defined. For this reason, Applicants respectfully submit that there is no analogous teaching of a computer-implemented tool which produces a numeric value representative of strength of evidence of the responses given to the different question sets, as recited in their independent claims. As such, the claims presented herewith are believed to patentably distinguish over the applied and known art.

Applicants’ computer-implemented tool further plots each root cause of trouble of the multiple possible root causes of trouble using the produced numeric values for strength of evidence versus the numeric values for impact of the root causes of trouble *on the product development management effort*. In Applicant’s recited invention, the graph facilitates assessing the product development management effort by facilitating and identifying a possible root cause of trouble of the multiple possible root causes of trouble with high impact on the product development management effort, and strong responses in support of the presence of that root cause of trouble.

The above-noted features of Applicants’ invention provide numerous advantages. For example, evaluating the graph produced provides a basis for recommendations for remedy of a disclosed product development management deficiency. The graph highlights problems and allows problem solvers to quickly identify root causes that have significant negative impact on the project management and have strong evidence for support. The graph recited also facilitates quick elimination of those issues that have low or no negative impact on the project

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management, and eliminates issues that are not supported by evidence. The above-noted aspects of Applicants' independent claims patentably distinguish Applicants' protocol over the teachings of the applied and known art. In Whitacre, a chart is generated that compares an individual worker's performance against standard performance and his co-workers (see paragraph [0096] of Whitacre). In FIG. 4, one pie chart represents the performance of an individual worker, while the other pie chart represents performance of the entire team. There is no teaching or suggestion that the graphs depicted in Whitacre in any way relate to how particular root causes of trouble impact or affect an individual's performance. Thus, the charts of Whitacre do not assist team leaders in identifying root causes of trouble that have significant impact on the individual performance, nor do the charts suggest potential causes that are most likely to have the greatest impact on the individual's performance. Since the Provisional, Miller, AAPA and Nelson documents also do not teach the above-noted deficiencies when applied against Applicants' protocol, it is respectfully submitted that the independent claims presented patentably distinguish over the applied and known art.

For at least the above-noted reasons, Applicants respectfully submit that the independent claims presented herewith are patentable. The dependent claims are believed allowable for the same reasons as the independent claims, as well as for their own additional characterizations.

*Should any issue remain unresolved, however, Applicants' undersigned representative requests a telephone interview with the Examiner to further discuss the matter in the hope of advancing prosecution of the subject application.*

Respectfully submitted,

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Dated: September \_\_\_\_, 2009.

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